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Ann Pan

University of San Francisco, apan@usfca.edu

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The Significance of Timing of Patient Daily Weights and the Barriers

Ann Pan

University of San Francisco, Nursing

Abstract

Background. Current unit practice is that patient daily weights are obtained in the afternoon or evenings. However, patient weights in the afternoon and evenings are not accurate dry weights. According to evidenced based research, to obtain an accurate patient daily weight, patients should be weighed every morning, after their first void and before they eat breakfast.

Purpose. The focus of the study was to compare the current practices of obtaining daily weights in the afternoon and evenings, compared to the evidenced based practice recommended in the literature.

Method. Through interviews and surveys with staff, the barriers to obtaining patient weights in the mornings, rather than that of the afternoon or evenings, were evaluated. Interviews with nursing staff and nursing assistants were conducted, discussing possible implementations to overcome the barriers discussed.

Results. The proposed solutions were organized and addressed with management for possible implementation.

Statement of the Problem

Currently, patient weights are obtained in the afternoon or evenings. However, patient weights in the afternoon and evenings are not accurate dry weights. According to evidenced based research, to obtain an accurate patient weight, patients should be weighed every morning, after their first void and before they eat breakfast. The focus of the study was to compare the current practices of obtaining daily weights in the afternoon and evenings, compared to the evidenced based practice recommended in the literature. The barriers to obtaining patient weights in the mornings, rather than that of the afternoon or evenings, were also evaluated.

Rationale

According to the current unit protocol, all patients are supposed to be weighed weekly, whereas, 1) pre- and post- heart transplants, 2) heart failure patients, 3) patients receiving diuretic therapy, and 4) patients in renal failure or receiving dialysis are to be weighed daily (Stanford Hospital & Clinics, 2012). Per the manager, in practice, all patients were being weighed daily to avoid any confusion. Also, in order to accommodate all patient daily weights, the data was obtained in the afternoon due to staffing convenience and availability. However, this was not the recommended protocol shown in the literature. The current unit practice and evidenced based practice was compared. The barriers to performing evidenced based practice were also be assessed.

Literature Review

Curtis et al., in the article, “The importance of daily weight measurements in heart failure patients: a performance improvement project”, addressed the problem of lack of accurate daily weights by 0500 daily. Despite the policy and importance of daily patient weights, it was shown that accurate daily weights were still lacking. They discovered that the problem was the lack of

availability of standing scales and lack of nursing staff support (NSS) understanding of the importance of daily patient weights. They supplied the floor with an additional standing scale and educated the nursing staff and support on the importance of daily weights. With these implementations, accurate patient daily weights increased by 90% (Curtis et al., 2012).

Sherer et al., in the article, “Weighing In on the facts: Best practices in daily weight monitoring for heart failure patients”, noted that although daily patient weights were critical data in managing heart failure patients on diuretic therapy, only 86% of patient weights were documented. It was found that the reason why patient daily weight were not being obtained was secondary to the lack of nurses understanding the evidenced based practice of how critical accurate daily weights were to the care plan of heart failure patients. After educating the nurses about the best practices for the patients, accurate daily weights increased to 93% (Sherer et al., 2012).

In the journal, *Nursing Management*, an article called “Improving CHF Outcomes” addressed issues that were vital to the care of CHF patients to improve their outcomes. The authors emphasized consistency and continuation of patient care. Not only was continuous evidenced based practice patient education imperative, but daily processes and monitoring such as daily weights, diet, activity, medications, physician follow-up, and signs and symptoms of CHF exacerbation were also required elements of care. On the hospital unit, it was shown that there were many inconsistencies among the nursing staff in regards to daily activities and patient education. The authors found and addressed the barriers of leading to inconsistent practices, which led to improved patient outcomes. The hospital readmission rate declined by 37%, while the mortality rate decreased by 25%. In addition, 95% of CHF patients received appropriate CHF

education and follow up within a 12 month period after implementation (Howell & Kniceley, 2007).

At Naval Hospital Pensacola, Florida, a study was conducted aiming to reduce readmissions of CHF patients. The article “Reducing Readmissions for Congestive Heart Failure” noted that hospital readmissions for CHF were frequently preventable. Multiple disease factors and treatments, such as new medications, therapies, exercise programs, and daily health monitoring and maintenance, contributed patient readmission rates. In addition to other therapies, one aspect of patient daily care was the consistency of obtaining daily body weight. Weight gains of 1.5 to 2.0 kg per week with new signs or symptoms may signal a need for a change in therapy. Making sure accurate diuresis being achieved was a vital portion of CHF patients’ plan of care (Hoyt & Bowling, 2001).

The article by Hauptman et al, “The Heart Failure Clinic: A Consensus Statement of the Heart Failure Society of America”, stated an important aspect of heart failure management is the physiological daily data, including body weight, blood pressure, and heart rate. This data should be tracked by the patient and shared with the heart failure management team. Being able to track weight and body mass index on a regular basis is part of the nutritional assessment component of care. With the accurate tracking and measurement of daily weights, patients and providers will be able to track if patients are suffering from excess fluid volume accumulation, which a crucial part of heart failure management (Hauptman et al., 2008).

In the article, “Promoting Self-Care in Persons with Heart Failure”, Riegel et al. stated accurate morning daily weights were essential in heart failure disease maintenance. Diuretic therapies and doses vary in response to changes in body weight. Considerable weight gain is a significant problem for heart failure patients. Unintentional weight change of 3 or more pounds

in addition to increased severity and frequency of chest pain indicate clinical deterioration of the patient's disease process (Riegel et al., 2009).

Cost Analysis

After discovering the RN and NA barriers to having daily morning weights on patients, the author devised a unit implementation. The specific implementation determines costs. It was unnecessary to obtain additional resources, such as additional scales. Staff used existing resources currently available on the unit to implement the change.

Methodology

After noticing the lack of morning weights, the author wished to first examine the reason why the weights are being obtained in the afternoon or evenings rather than that of the morning. The author wanted to compare current patient care on this intermediate ICU versus that of evidence based practice.

After reviewing evidenced based practice, a survey (Appendix B) was used to evaluate the staff's understanding of patient daily weights. Barriers to obtaining patient weights in the morning were identified. Interviews were conducted to discuss potential ideas to overcome the barriers. These ideas were organized and addressed with management for possible implementation.

Data Source

To be able to obtain data about the barriers of obtaining morning weights, the author interviewed the RNs and NAs on the unit. Using a staff interview form, shown in Appendix B, the author addressed that major reasons as to why the weights are not being obtained in the morning. Proposed implementation addressed the barriers to increase the number of morning

weights available for morning rounds. This was discussed with the manager to provide possible implementations.

Root Cause Analysis

During interviews with nurses and nursing assistances on the unit, it was noted that patient daily weights are obtained in either the afternoon or evening. A root cause analysis was performed, assessing the barriers on the unit preventing daily morning weights of all patients with various diagnoses. The root cause analysis chart is shown in Appendix A. It addressed the issues as to why patient weights are obtained in the afternoons and evenings. The themes included timing, staffing, resource availability, and patient concerns. In orange, at the end, the chart displays solutions to the barriers that are identified.

Survey Results

As shown in Figure 1, the survey was completed by 56% of the staff (42 out of 75). In the results, shown in Figure 2, 5 of the 42 surveys were completed by nursing assistances. The reminder of the surveys was completed by staff RNs.

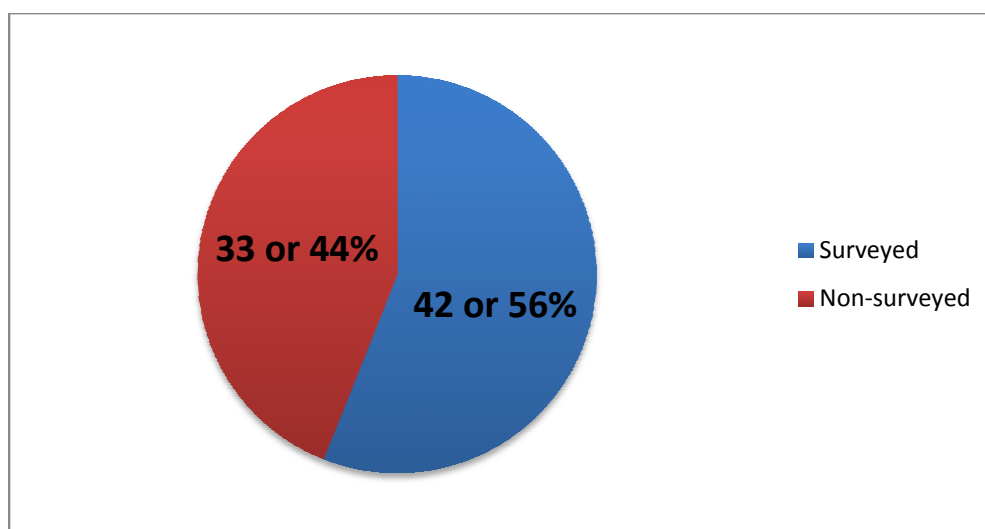


Figure 1. Staff members surveyed vs. non-surveyed.

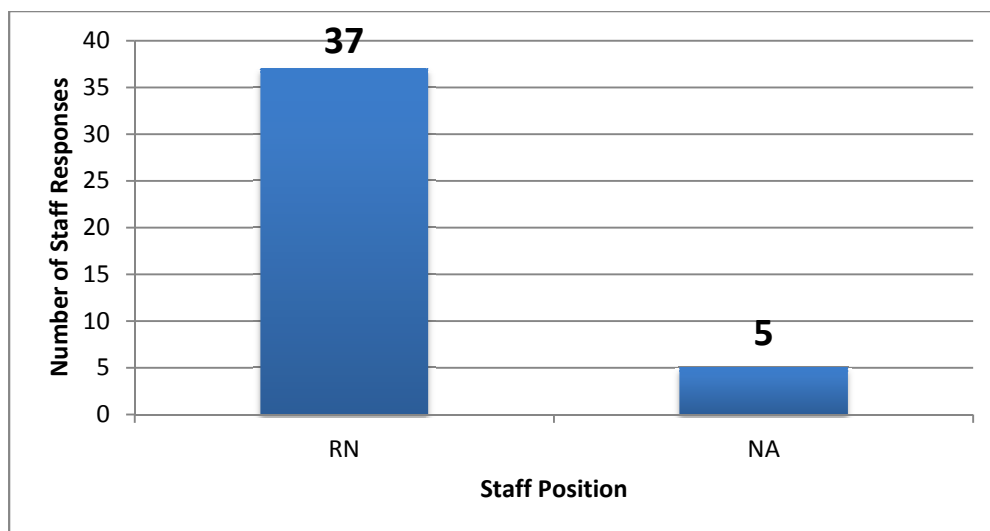


Figure 2. Staff members, RNs and NAs surveyed.

Figure 3 shows that the majority of staff indicated that current weights are obtained in the evening. However, in Figure 4, they noted that the optimal time to obtain patient weights is in the morning.

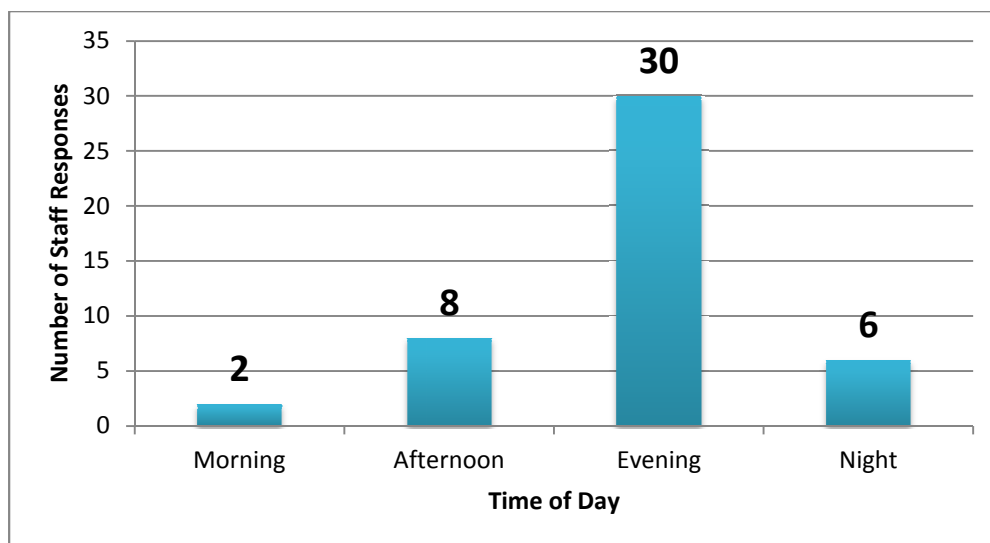


Figure 3. Times patient weights obtained.

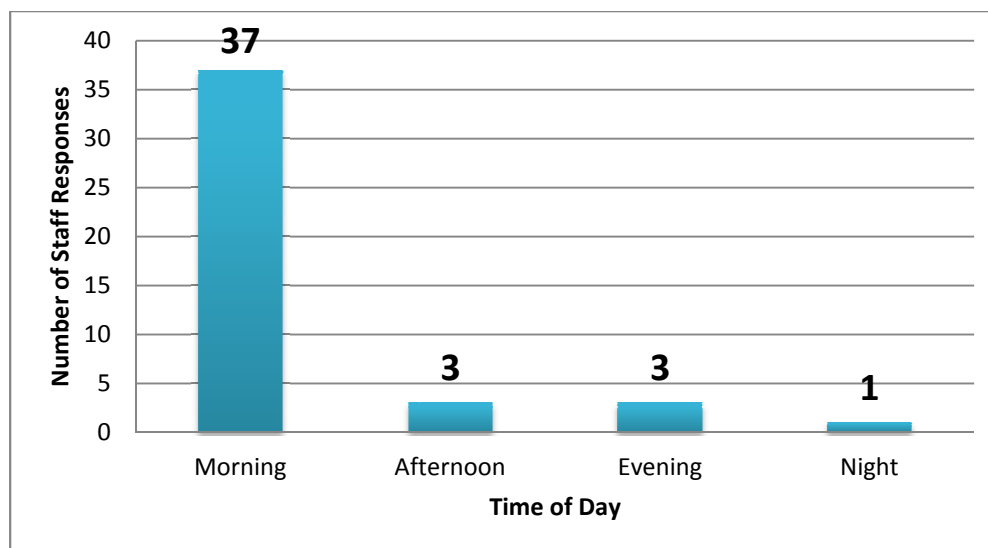


Figure 4. Staff perception of optimal time to obtain patient weight.

Figure 5 illustrates the various barriers identified by the staff. The barriers were grouped into four main categories of timing, staff, resource availability, and patient concerns. Each category was broken down into specific concerns that nurses and nursing assistants acknowledged, which is shown in the root cause analysis in Appendix A. The greatest concern that was specified was the issue of timing. It was noted that the numerous morning current morning activities, prevented the weighing of patients in the mornings.

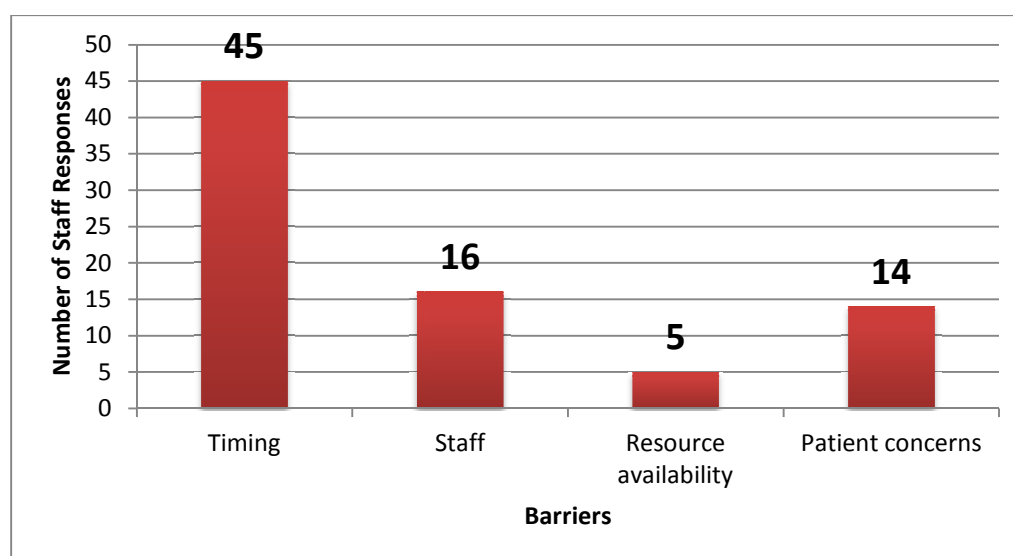


Figure 5. Barriers to daily morning weights.

During the staff interviews, the author discussed possible implementations to overcome the barriers that were identified, which are shown in Appendix D. Specific implementations are illustrated in orange in the root cause analysis chart in Appendix A.

Expected Results

After addressing the barriers to obtaining daily morning weights, the author hoped to educate the staff on the importance of daily patient weights in the morning. Afterwards, the author hoped to address the barriers identified by the staff to develop possible implementations. With several solutions in mind, the author discussed the results with the unit manager for possible implementation in the future. By the end of 2015, the author hoped that all patient weights on the unit will be done in the mornings, after the patients' first void and before their first intake to ensure accurate patient data.

Nursing Relevance

Although evidence based practice states that daily morning weights are critical for the care of heart failure patients, in reality, secondary to the lack of time and staff, it is not practiced on the unit. This project contributed on the unit by assuring that the nurses and nursing assistance understand the importance of daily weights, especially that of patients who are the following: 1) pre- and post- heart transplantation, 2) heart failure, 3) receiving diuretic therapy, and 4) in renal failure or receiving dialysis (Stanford Hospital & Clinics, 2012). This reinforced the drive for quality patient-centered care, rather than for staff convenience. It also demonstrated the importance of staff advocacy for change to occur to improve patient outcomes. When staff members notice discrepancies in current policies with evidenced based practice, it is important to update the policy to ensure up-to-date clinical practice.

Conclusion

Current unit practice is that patient daily weights are obtained in the afternoon or evenings. However, patient weights in the afternoon and evenings are not accurate dry weights. According to evidenced based research, to obtain an accurate patient daily weight, patients should be weighed every morning, after their first void and before they eat breakfast. According to the current unit protocol, all patients are supposed to be weighed weekly, whereas, 1) pre- and post- heart transplants, 2) heart failure patients, 3) patients receiving diuretic therapy, and 4) patients in renal failure or receiving dialysis are to be weighed daily (Stanford Hospital & Clinics, 2012). In the article, “Promoting Self-Care in Persons with Heart Failure”, Riegel et al. stated accurate morning daily weights were essential in heart failure disease maintenance (Riegel et al., 2009).

After noticing the lack of morning weights, the author examined the reason why the weights were being obtained in the afternoon or evenings rather than that of the morning. Current patient care on this intermediate ICU was compared to evidence based practice. After reviewing evidenced based practice, a survey (Appendix B) was used to evaluate the staff’s understanding of patient daily weights. Barriers to obtaining patient weights in the morning were identified. In addition to the questions that were asked on the survey in Appendix B, the author also interviewed the nurses and nursing assistants about the potential solutions to overcome the barriers that the staff identified. Comprehensive results are listed in Appendix D.

According to the literature, morning daily weights, after the first void and before the first intake, were recommended for heart failure disease management. With the data collected, a road map for obtaining patient weights in the morning was established. This was discussed with management. However, the challenge of the inpatient environment was not set up for morning daily weights secondary to a lack of resources. Over 50% of the staff was surveyed. Per

management, the staff indicated several barriers that were unable to be solved (i.e. more staff). After presenting the results to the nursing counsel, the recommendation is for the counsel to use the data to devise a plan of action.

There were multiple limitations to this study, which include sample size and timing. This was designed to be a pilot project for one unit in the hospital. Therefore, the sample size and interventions cannot be generalized to other hospital units. Also, due to the time constraint of three months, potential implementations of the project were not able to be applied to the unit. Therefore the impacts of the plans were not able to be evaluated. In the future, the author recommends that a larger sample size be used to conduct the study. With the results of the larger sample size and more time, the author recommends the application of the implementations to evaluate the results.

In addition to this project, to enhance the long term outcomes of the future implementations, a champion was assigned. With the unit manager's approval, she will be able to carry out the implementations that were suggested in this project. She will also be able to track the progress of the implementations and patient outcomes with the implementation of morning weights.

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Appendix List

Appendix A: Root Cause Analysis

Appendix B: Staff Interview

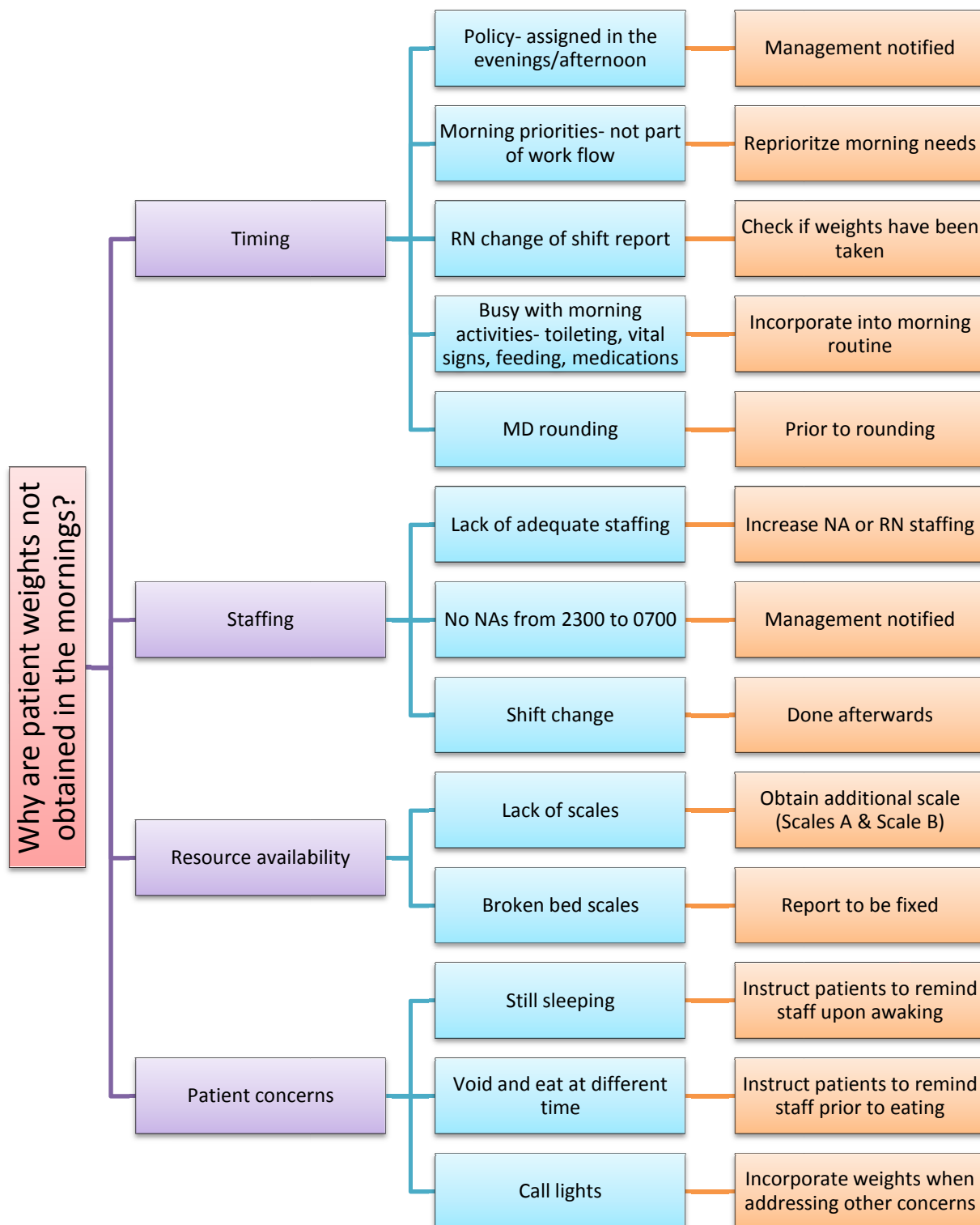
Appendix C: Timeline

Appendix D: Interview Results

Appendix E: Graphed Survey Data

Appendix A

Root Cause Analysis



Appendix B

Staff Interview

Date:

Staff Position: RN NA Other (please specify)

1. When are daily weights being obtained?

Morning

Afternoon

Evening

Night

2. When is the optimal time to obtain patient weights?

Morning

Afternoon

Evening

Night

3. Based on your answer in question #2, what are the barriers?

a)

b)

c)

d)

e)

Appendix C

Timeline

9/2014-11/2014- Literature Review.

10/6/14- Shared governance meeting to get a sense of the management thinking on the unit

10/8/14- IRB approval received from Stanford Compliance Office

10/13/14- Review the literature for EBP related to daily weights.

10/20/14- Evaluate RN and CNA's understanding of the timing of daily weights. Pass out questionnaires and survey staff.

10/27/14- Identify the barriers of obtaining patient weights in the morning, using the results of the survey and interviews.

11/3/14- Educate the staff on barriers found.

11/10/14- Discuss with Myra, the manager, about the possible implementations to overcome the barriers identified.

11/16/14- Finish paper and write abstract.

11/17/14- Finish poster.

11/24/14- Project due.

12/2/14- Present to Stanford Research Council.

12/10/14- Poster session at USF.

Appendix D

Interview Results

Staff Position: RN- 37 NA- 5 Other (please specify)- 0

1. When are daily weights being obtained? [Some people chose more than one answer.]

Morning- 2

Afternoon- 8

Evening- 30

Night- 6

2. When is the optimal time to obtain patient weights? [Some people chose more than one answer.]

Morning- 37

Afternoon- 3

Evening- 3

Night- 1

3. Based on your answer in question #2, what are the barriers? [Some people listed more barriers than others.]

Assigned in the evening

Busy with patient activities (NA- bathroom, toileting, feeding, call lights) (RN- medications, getting people out of bed, vital signs, MD rounding, critical labs, call lights)- 38

Patient requests in the morning delay obtaining daily weights

Patient sleeping- 10

RN shift report- 2

Timing- 1

Staff compliance

Lack of staff- 6

No NAs from 2300 to 0700

Inadequate staff

Staffing- NAs do weights. No NAs before 0700 to obtain weights & nurses during nights don't do it either.

Morning priorities

Shift change time, unable to determine which shift would be responsible for it- 2

Lack of MD order to modify standardized weight time- 3

High acuity

Broken bed weights- 2

Patient unable to get out of bed- 2

Lack of scales (only one on the unit)- 3

Patients void and eat in the mornings at different times. Hard to coordinate with their schedules

Weights are low staff priority- not part of RN or NA current morning workflow- 2

*** Additional interview question discussed with several staff members-

How can these barriers be overcome? [Some people listed more solutions than others.]

Hire more staff- 5

Hire more NAs

Done first thing in the morning with vital signs- routine- 5

Communication between NAs and RNs- 2

Reprioritization of morning needs- 5

EPIC modification to trigger a weight on specific patients, such as CHF patients

Speak with RNs, NAs, and patients for ideas on how morning weights would work

Take weights at 0600. After the lab draw, have the patient get up for weights- 4

Have night shift do it if the patient is awakened any time after 0500- 4

Have night shift take daily patient weights before AM shift comes on

Explain to the patient that he/she has to wake up early for weight to be taken- 5

Have the patient remind the nurse that he/she needs to have his/her weight taken in the morning when he/she wakes up- 2

Use the bed weight in the AM before the patient wakes up- 2

Have NAs start shifts earlier

Have day NAs do weights as soon as they start their shifts

Done with AM toileting- 2

Mobility assessment should be done, PT consult to see if the patient is able to get out of bed for daily weights

Set a specific or standard time (not too early or late to have weights taken)- 4

2nd scale so both NAs can take them simultaneously- 2

Education on medical necessity/improvement of patient outcomes- 2

Flexibility of team members to wait to discuss plan of care

More money

Need better coverage during the 0600-0800 hours for patient needs

Appendix E

Graphed Survey Data

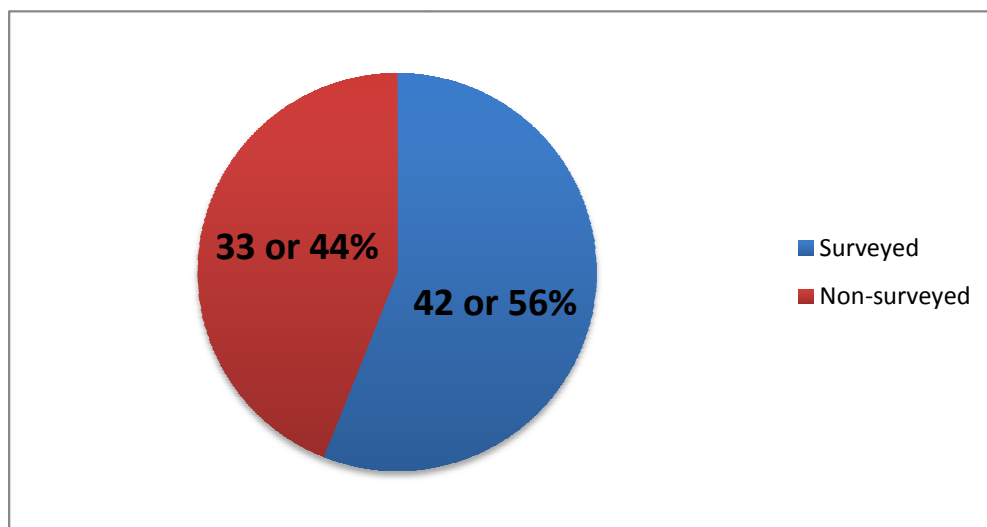


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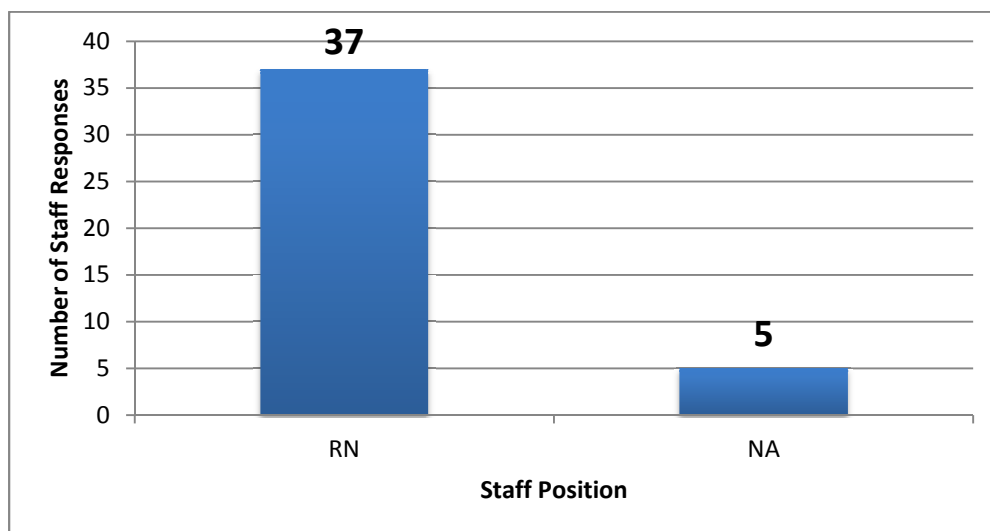


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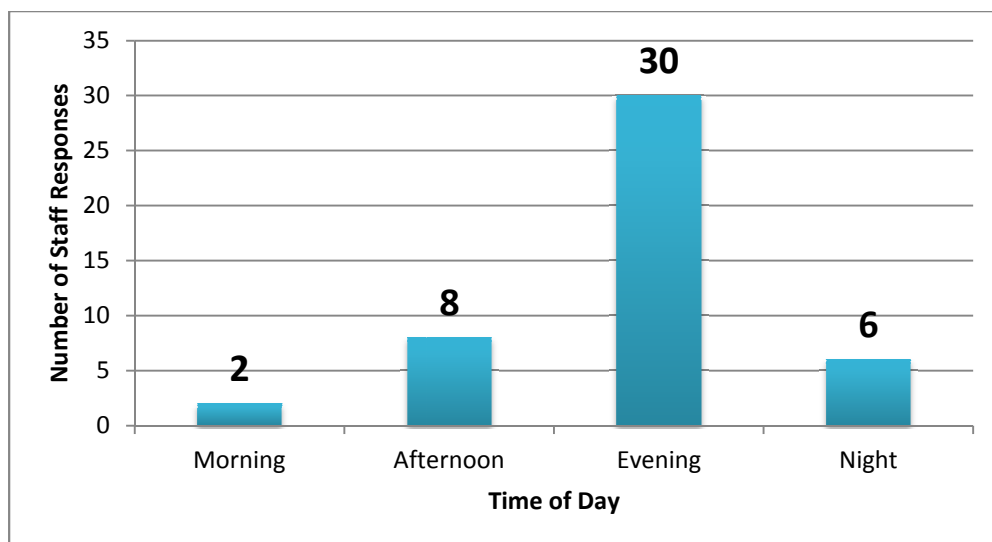


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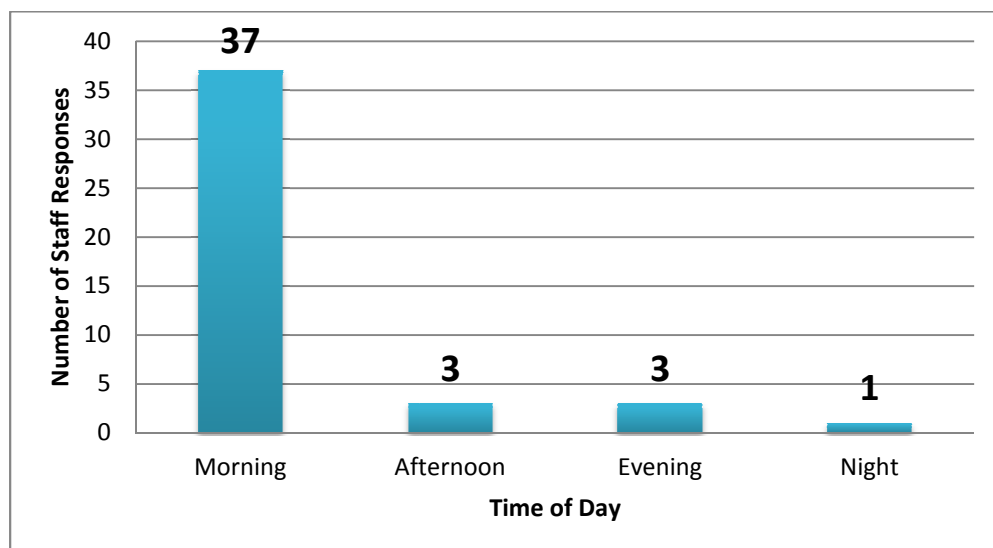


Figure 4. Staff perception of optimal time to obtain patient weight.

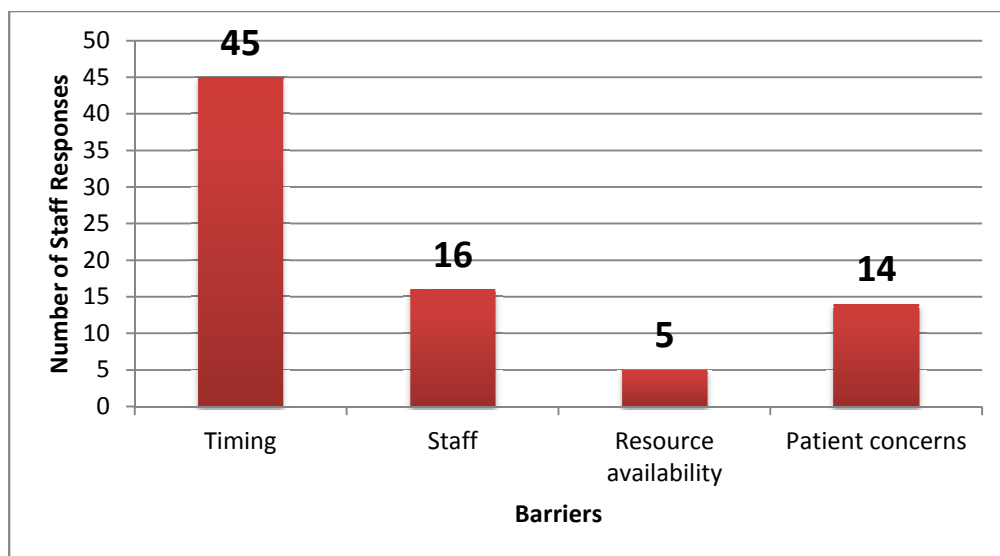


Figure 5. Barriers to daily morning weights.